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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/572,538

03/17/2006

Egon Zich

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535 7590 10/30/2008

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EXAMINER

BUSHEY, CHARLES S

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

10/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,538	Applicant(s) ZICH ET AL.	
	Examiner Scott Bushey	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3-17-06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

Specification

2. The abstract of the disclosure is objected to because legal phraseology, i.e., "consists of" and "comprising", should be avoided in the abstract. Correction is required. See MPEP § 608.01(b).

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3. The disclosure is objected to because of the following informalities: 1) page 4, line 21, "dense" is misspelled; 2) page 5, line 3, "advantageous" is misspelled.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 5 and 11 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the higher surface area layers of the packing having a surface area 2 times the surface area of the other layers, and layers of greater surface area projecting below the packing at their lower ends between 2 and 50 mm, or being generally at different heights at their upper ends, does not reasonably provide enablement for the higher surface area layers of the packing having a surface area 2 to 10 times the surface area of the other layers, and layers of greater surface area projecting below the packing at their lower ends between 2 and 100 mm, or being generally set at 2-100 mm deeper than the other packing layers at their upper ends. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or the invention commensurate in scope with these claims. Applicant should note page 4, lines 6-9, as well as page 5, lines 3-7 of the originally filed specification.

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7. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, "the lower packing" lacks antecedent basis. Also, wherein the term "layers" is generally understood to connote horizontal strata, unless otherwise defined, it is unclear as to what applicant intends to claim with respect to the layers in the instant claims, since the specification and drawings appear to be referring to upstanding, vertically aligned elements within a packing block.

In claim 3, applicant refers to the layers being set at an acute angle or perpendicular, however, no basis is given as to what the claims angles are set relatively. Is applicant referring to a horizontal plane, or a vertical axis, or to some other directional basis?

In claim 4, the reference numeral "(3)" on the last line of the claim should apparently be replaced by --(2)--.

Regarding claims 6, 10, and 11, the term "preferably" renders the claim indefinite because it is unclear whether the limitations following the term are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 7, the phrase "in particular" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 12 and 13 provide for the use of the packing, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 12 and 13 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-5, 7, 12, and 13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kaibel et al (Figs. 6 and 7; col. 2, lines 29-34; col. 3, line 21; col. 4, lines 32-34).

Applicant should note that the instant claims are clearly not limited to upstanding layers within a packing element, wherein certain upstanding (vertical, as shown by the

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figures of the application) have different densities than other upstanding layers within the same packing element.

12. Claims 1-7, 12, and 13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Zich et al (Fig. 8; paragraphs [0055] and [0057]).

Applicant should note that the instant claims are clearly not limited to upstanding layers within a packing element, wherein certain upstanding (vertical, as shown by the figures of the application) have different densities than other upstanding layers within the same packing element.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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15. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Kaibel et al or Zich et al, as applied separately above, taken in view of Sunder et al '638.

Kaibel et al or Zich et al, as applied separately above, each alternatively disclose applicant's invention as recited by instant claim 9, except for packing layer having about 5-20% open area for free flow therein.

Sunder et al '638 (col. 6, lines 32-53) disclose conventional vertically arranged packing layers having free flow passages therethrough that amount to 5-20% of the overall surface area of the packing layer. It would have been obvious for an artisan at the time of the invention, to provide the packing layers of either of the alternative primary references with free flow passages therethrough that amount to 5-20% of the overall surface area of the packing layer, in view of Sunder et al '638, since such would facilitate uniform distribution of the phases across the entire packing layer, thereby improving distribution within the column.

Allowable Subject Matter

16. Claims 8, 10, and 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

It is noted that with respect to instant claims 10 and 11, Meski et al, cited as of interest, discloses offsetting alternating packing layers vertically, so as to intermesh with overlying and underlying packing elements. However, even given this disclosure, it is not apparent that there is any suggestion to modify any of the prior art of record to

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provide such an offset specifically to layers of higher density within a packing having other layers of lower density, especially where the prior art suggests the varying density layers as aligned in a horizontal manner, rather than a vertical manner.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bushey whose telephone number is 571 272-1153. The examiner can normally be reached on M-Th 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Scott Bushey
Primary Examiner
Art Unit 1797

/S. B./
10-26-08

/Scott Bushey/
Primary Examiner, Art Unit 1797